

Section 485 - Public Safety 800 MHz Radio Building Coverage

485.01 Adequate Radio Coverage. Except as provided in Subsection 485.02, no person shall construct any building, construct an addition to any building that increases the gross floor area of the building by more than 20%, change the occupancy classification of more than 50% of the floor area of any building or cause the same to be done to a building, if such building fails to support adequate radio coverage for the Minnesota Regional Radio Communications System, including but not limited to firefighters and police officers. For the purposes of this Section 485, parking garages, parking ramps, stair shafts, elevators and stairwells are included in the definition of “building”. For purposes of this Section 485, adequate radio coverage shall be an average received field strength of no less than -93 dBm, or 1% BER, measured at 30 to 36 inches above the floor over 90% of the area of each floor including the basement in the building and other critical areas determined by the Fire Chief or the Fire Chief’s designee such as fire command centers, stairwells, elevators, high hazard areas, basements, and parking garages and ramps. Without an in-building radio system, only the received signal level standard must be achieved, as the talk-out path is equivalent to the talk-in path in this regional radio system.

485.02 Exempt Buildings. The requirements of Subsection 485.01 shall not apply to:

- A. Any dwelling unit or accessory building in the R-1 District or R-2 District.
- B. Any building of less than 25,000 square feet in gross floor area.
- C. Any building constructed of wood frame; provided that such building does not contain any metal construction or any below grade levels or below grade parking areas.

485.03 Amplification Systems Allowed. Buildings required by Subsection 485.01 to support adequate radio coverage which cannot support the required level of radio coverage required by Subsection 485.01 shall be equipped with approved bi-directional 800 MHz signal enhancement system(s) as needed. If amplification is used in the system, all required FCC authorizations must be obtained by the building owner prior to the use of the system. If any part of the installed system or systems contains an electrically powered component, the system shall be capable of operating on an independent battery and/or generator system for a continuous period of at least 12 hours without external power input. The battery system shall automatically charge in the presence of an external power input.

485.04 Testing Procedures. The following testing procedures shall apply to each building or structure required by Subsection 485.01 to support adequate radio coverage:

Subd. 1 **Acceptance Test Procedure.** Prior to the issuance of a certificate of occupancy, the owner of the building shall arrange for testing conducted by individuals acceptable to the Fire Chief to ensure the building conforms with the requirements of Subsection 485.01. Testing procedures shall conform to practices adopted and on-file with the Building Official.

Subd. 2 **Annual Tests.** When an in-building radio system is required to support the required level of radio coverage, the owner of the building shall arrange for testing conducted by individuals acceptable to the Fire Chief of all active components of the system, including but not limited to amplifiers, power supplies and backup batteries, a minimum of once every 12 months. Amplifiers shall be tested to ensure that the gain is the same as it was upon initial installation and acceptance. Backup batteries and power supplies shall be tested under load for a period of one hour to verify that they will properly operate during an actual power outage. If within the one-hour test period, in the opinion of the testing technician, the battery exhibits symptoms of failure, the test shall be extended for additional one-hour periods until the testing technician confirms the integrity of the battery. All other active components shall be checked to determine that they are operating within the manufacturer's specifications for the intended purpose. All deficiencies found shall be corrected and testing repeated. All test results shall be submitted to the Fire Chief within 30 days of the test date.

Subd. 3 **Five-Year Tests.** When an in-building radio system is required to support the required level of radio coverage, then in addition to the annual test, the building owner shall arrange for testing conducted by individuals acceptable to the Fire Chief to perform a radio coverage test a minimum of once every five years to ensure that the radio system continues to meet the requirements of the original acceptance test. A radio test shall also be performed whenever there is a change in or to the building that may have an impact on coverage. Examples of the types of changes that may change radio coverage are interior remodeling that adds and/or changes partitions, removal of windows, and the addition of metalized treatment to window surfaces. The procedure described by practices adopted by the City shall be used for these tests. All test results shall be submitted to the Fire Chief within 30 days of the test date.

Subd. 4 **Field Testing.** Fire and police personnel, after providing reasonable notice to the owner or the owner's representative, shall have the right to enter onto the property to conduct testing to be certain that the required level of radio coverage is present.

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